Village Sun Light

Village Solutions Home Light package

The Village Sun Light is:

- a new Solar Light in the Himalaya
- designed for rural villagers

Each Village Sun Light has:

- a 3 watt solar panel
- a Power Box with charging circuit
- a 6V 4.5 Ah Sunca storage battery
- 4 lamps, each with 6 LEDs, OR
- 2 lamps, each with 16 LEDs
- a switch for each lamp

Village Sun Light features:

- it is cheap and convenient
- it replaces a kerosene light
- it is easy to install
- it is durable
- it is easy to maintain

Children of Bhutanese Refugee Camp, Morang using LED Lamp

Village Sun Light

Village Sun Light benefits:

- it is cool ~ no burns, fires or smoke
- makes nighttime work is easy
- affordable for every person
- every child can study and progress
- helps Adult Education & Health Centers
- prevents nighttime accidents

The Solar PV Panel:

- 18 cells
- 3 W maximum power
- 9.5 V open circuit voltage
- 5.7 V maximum voltage at max power
- 525 mA maximum current

Village student studying in Kerosene Lamp (Tuki)

The Power Box:

- **Capacity:**
  - 13 W-hour energy available to user
  - 6 V maximum output voltage
  - 500 mA maximum current
- **Protection:**
  - battery undervoltage
  - battery overcharge
  - output short circuit
  - output current overflow
- **Display:**
  - 2 LEDs indicate status for:
    - battery level at startup

Village Sun Light

- solar Input
- charging
- output

The LED lamps

- each LED is 3 V, 10 mA, 0.03 W

Shanti Griha students using the LED Lamps

- each “6 LED” lamp uses 0.18 W
- four “6 LED” lamps use 0.72 W
- each “16 LED” lamp uses .48 W
- two “16 LED” lamps use 0.96 W
- a full battery gives:
  - 72 hours of 6 LED lamp
  - 27 hours of 16 LED lamp

Precautions:

- protect from fire and water
- keep Power Box away from children
- do not open the power box
- do not play with the switch
- keep the solar panel clean
- do not connect any other appliances or light except the Village Light
- use less power if the weather is not clear for more than a week
- lamps should be no more than 5 meters from the power box
- contact Village Solutions Office for technical support

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Technical Notes:

Village Sun Light installed in Odisa, India

- the programmed microchip in the Power Box's electronic circuit controls the flow of electricity:
- to ensure the total proper functioning of the power systems
- to protect the battery and give the maximum hours of good lighting
- to limit the solar power supply to the battery to prevent overcharging and overvoltage
- to limit the power supply from the battery to the lights to prevent over-discharging or excessive current flow

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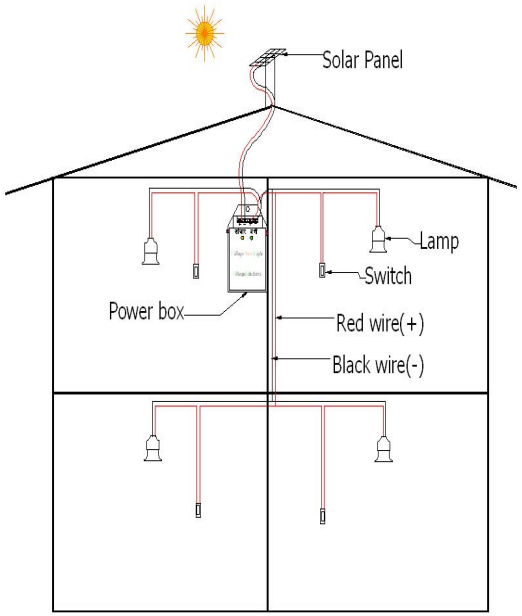

Village Sun Light installation layout

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